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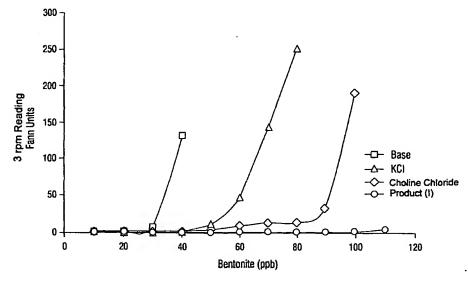
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(54) Title: SHALE HYDRATION INHIBITION AGENT AND METHOD OF USE



(57) Abstract: A water-base drilling fluid for use in drilling wells through a formation containing a shale which swells in the presence of water. The drilling fluid preferably includes: an aqueous based continuous phase, a weight material, and a shale hydration inhibition agent having the formula: H₂N- CH(CH₃)CH₂ { -OCH₂CH(CH₃)- }_x -NH₂ in which x is a value less than 15. The shale hydration inhibition agent should be present in sufficient concentration to reduce the swelling of the shale. Preferably x has an average number between about 1 and about 5 and more preferably x has an average number of about 2.6. Also inclusive of the present invention is a method of reducing the swelling of shale clay encountered during the drilling of a subterranean well, the method comprising circulating in the well a water-base drilling fluid formulated in accordance with the present invention.

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INTERNATIONAL SEARCH REPORT

Inter *Ional Application No PC i /US 01/02966

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C09K7/02									
According to International Patent Classification (IPC) or to both national classification and IPC									
B. FIELDS SEARCHED									
	cumentation searched (classification system followed by classification COOK	on symbols)							
IPC 7 CO9K									
Design extended other than minimum documentation to the extent that such documents are included in the fields searched									
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched									
Electronic da	ala base consulted during the international search (name of data ba	se and, where practical, search terms used)						
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X Furth	her documents are listed in the continuation of box C.	Y Patent family members are listed	и аплех.						
° Special ca	tegories of cited documents :	*T* later document published after the inter or priority date and not in conflict with the							
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"E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered to									
"L" document which may throw doubts on priority claim(s) or involve an inventive step when the document is taken alone which is cited to establish the publication date of another "Y" document of particular relevance; the claimed invention									
connot be considered to involve an inventive step when the document referring to an oral disclosure, use, exhibition or document is combined with one or more other such docu-									
other means ments, such combination being obvious to a person skilled 'P' document published prior to the international filing date but in the art.									
	later than the priority date claimed *&* document member of the same patent family								
Date of the actual completion of the international search Date of mailing of the International search report									
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	European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nt,	Davidan A							
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